

Abstract

A solid state thermal engine has two drums, each drum having two pulleys positioned thereon. Each pulley on the one drum is coupled to its counterpart pulley on the other drum via a belt, chain or other connector. One of the belts, referred to as the active belt, is heated which causes the active belt to expand. The expansion decreases the tension on the active belt, and further causes the active belt and the pulleys on which it is positioned to rotate. In a preferred embodiment, the active belt is manufactured out of a memory metal such as NITINOL. In another embodiment, a system of several drums and pulleys are used to implement a chain fall device.